

Data Acquisition: Primer

6/23/09 S. Pordes & T. Tope:

Scope: Ch1, 2 and 3 on; Ch1 & 2 at 1 MOhm, ch3 at 50 Ohm and inverted (down arrow).
On Menu bar: Display: Horiz/Acq -> Acquisition Mode -> Avg, 200 microsec, 2.5MS/s
400 ns/pt, Ch1 and 2 to see signals (2 mV minimum), Photodiode in Ch3 inverted

Nim 'HV Relay Module' set to Remote Control (set to Local to check voltages)

Walter's Box on top: set to Auto. and RUN. The box turns the power to the flash-lamp on and off in response to a signal from the DAQ program. The power goes off after 100 seconds to prevent damage to the light-fiber in case something happens to the computer or the program. The timing-fault light goes on. Push Reset to resume operation. **If the computer is off, the flasher may run. Set the lower switch on the box to OFF.**

The data acquisition program is called PRMv10 –shortcut on the desktop. The user sets the interval between sets and how many readings per set. Once the Liquid Status disk is green and the parameters in the boxes below are set, press the Start DAQ button to start

To take a reading –right now -, press Stop DAQ and then Start DAQ.

PRM Data Acquisition Software Ver 2.8 AEB PRM v10

Interval (Min) 180 Sets 1 Liquid Status

Remaining 134:12

Waiting for Next Interval

Smoothing = 40 0.0000004s V

RMS Cut = 10

Stop DAQ

Run Number 5241

Run FileName C:\PrM Data\Run_05241.txt

Log File Path E:\

Results

6/23/2009 12:18:50 PM	Anode Peak = 7.562e-03
Run = 5241Pass = 1	Anode Time = 8.524e-04
Diode Peak = -2.720e-02	Anode Baseline = -8.000e-04
Diode Time = -4.000e-07	Anode Rise = 2.764e-05
Diode Baseline = 0.000e00	Cath Factor = 1.729e00
Cathode Peak = -7.102e-03	Anode Factor = 1.143e00
Cathode Time = 1.388e-04	Anode True = 9.968e-03
Cathode Baseline = -8.000e-04	Cathode True = 1.090e-02
	LifeTime = 9.574e-03

O-Scope

☒ CH1 ☒ CH2 ☒ CH3 ☐ CH4

Display

Analysis Wave Choice

Ch 1	<input checked="" type="checkbox"/> Smooth	<input type="checkbox"/> Raw
Ch 2	<input checked="" type="checkbox"/> Smooth	<input type="checkbox"/> Raw
Ch 3	<input type="checkbox"/> Smooth	<input checked="" type="checkbox"/> Raw

Print Form

Minutes between readings
To change, highlight and type new value. The lesser of the time to the next reading and the new interval will show – be patient

Interlock: If the disk is red, double-click on Liquid Status to run.

Click to Start and Stop DAQ

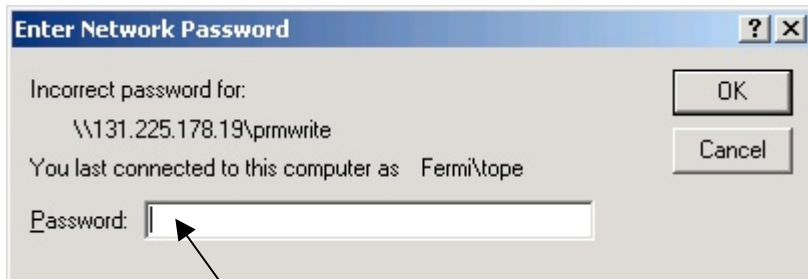
How many data sets are taken each reading (usually set to 1)

Log File Path points to the mapped drive on the iFix PC – see the following pages for details

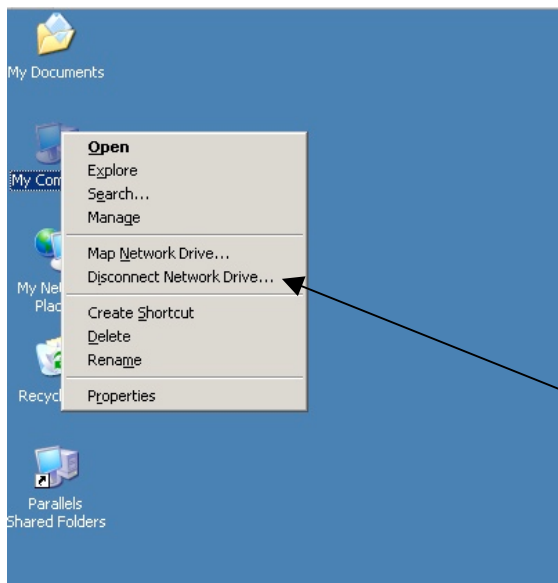
Ch1 ,2 and 3 ticked

Ch1 & 2 Smooth, Ch3 Raw (takes 2 clicks to set)

When the Tektronix scope PC is rebooted, it will try to connect to the iFIX PC by mapping a link to the iFIX PC hard drive. The scope PC writes the purity monitor data to the iFIX PC in the form of a .CSV file so that the purity monitor data can be included in the web server historical plots.

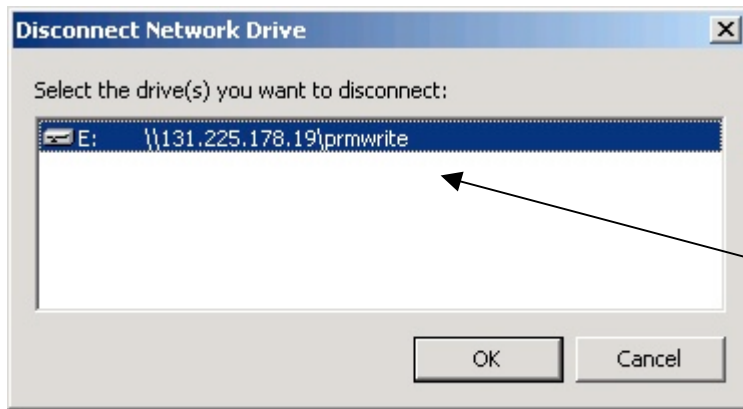


Upon reboot it will ask for the password of the last Fermi domain user to map the drive. If that user is available they should enter their password. Otherwise, click cancel.

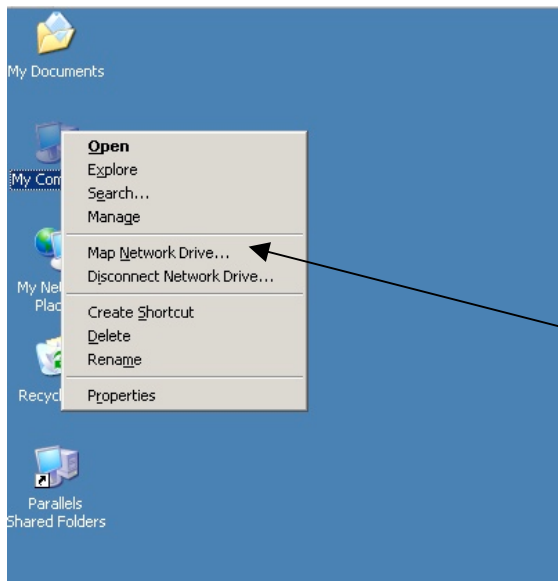


If the previously logged in user is not present, the drive must be disconnected and re-mapped.

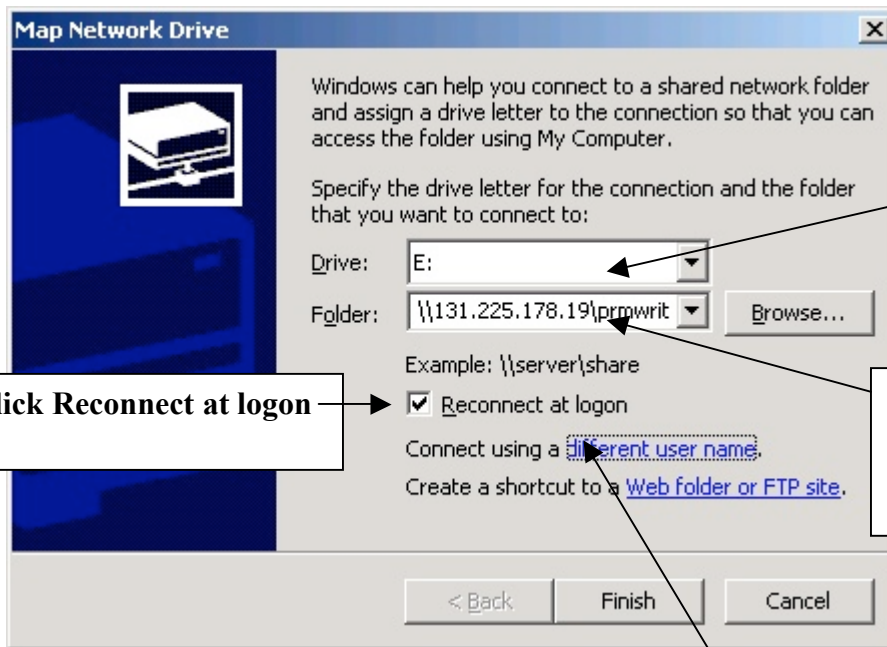
Right click my computer and select Disconnect Network Drive...



Select this drive and click OK.



Right click my computer and select Map Network Drive...

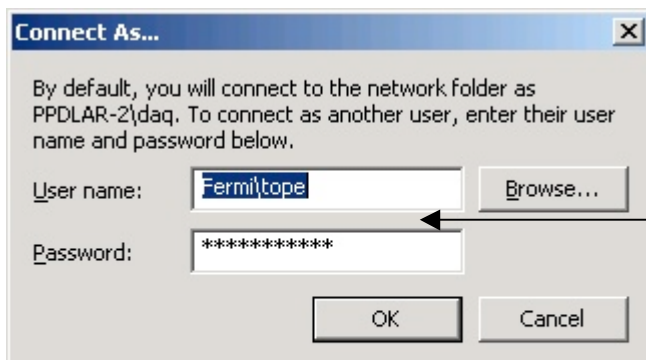


Select E:

Click Reconnect at logon

In the Folder data entry box type
[\\131.225.178.19\prmwrit](#)

Click Connect using a [different user name](#)



Enter the User name as Fermi\xxxx where xxxx is your Fermi windows domain user name and enter the corresponding password.

